



# 2015 MOWG Flight Clinic

Major Joe St. Clair MOWG DOV

#### Flight Clinic Makeup (CAPR 60-2):

#### **Ground Phase**

- Must be included in the flight clinic.
- Increase pilot's understanding of:
  - Rules of flight
  - Principles of flight
  - Subjects directly affecting safe flight operations

#### **Flight Phase**

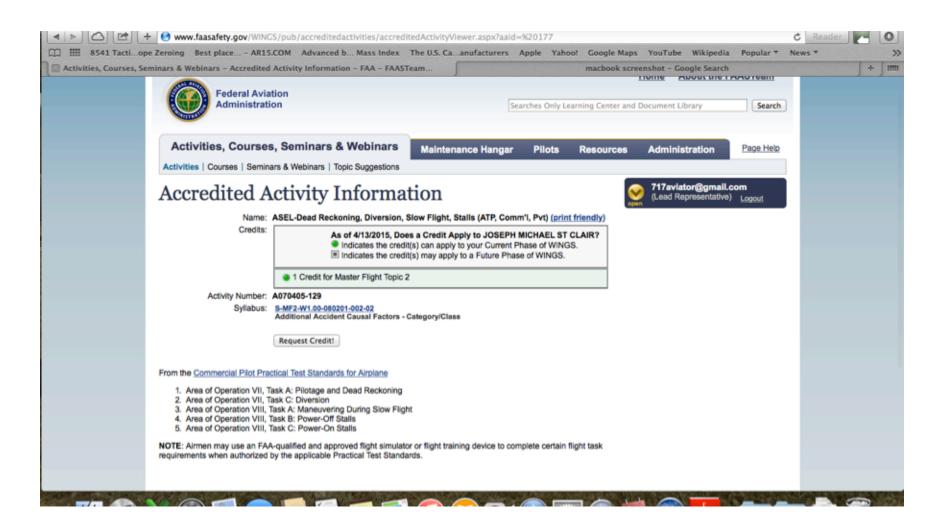
- Should be included in the flight clinic, if practical.
- Requires accomplishment of the in-flight maneuvers necessary to operate an aircraft safely.
- Must be with CAP instructor or CAP check pilot.
- Should be limited to 1 hour of flight.
- FAA Flight Reviews, CAPF 5s, IPCs may be included as time and funds permit.

Flight clinics are not for aircrew training!

#### **Ground Phase**

- TAA aircraft have lower total accident rate but higher fatal accident rate:
  - http://download.aopa.org/asf/TAA2007.pdf
  - http://www.ntsb.gov/news/events/Pages/2014 Tech Advanced Aircraft SEM.aspx
- G1000 gound training today to help us get more familiar with TAA cockpits and help to reduce the potential for future accidents.
- G1000 is the future of CAP flying. Newest C172s added to CAP fleet this year were G1000 equipped.
- Ken White, CAP Instructor, will lead this portion of the clinic.

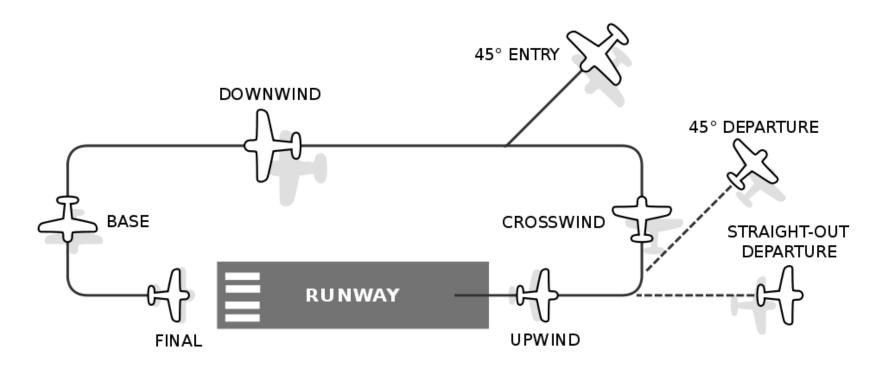
### Flight Phase



#### So why stalls and upset recovery?

- Safety focus for NTSB in 2015
- As pilots, we should not be scared of stalls!
- We should be able to recognize them immediately.
- We should be able to know how to recover from them safely.
- Lastly......

#### We are exposed to them every time we fly.



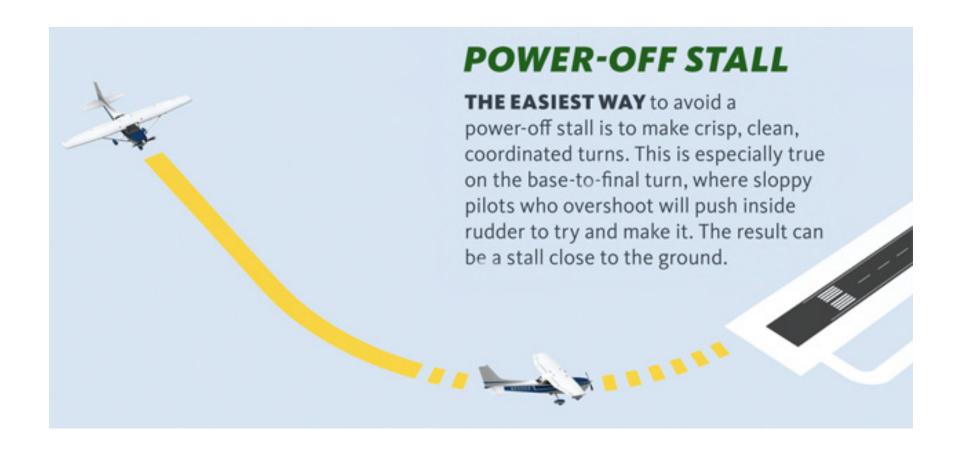
34% of stall accidents occur in the approach to landing configuration. 40% of stall accidents occur in the takeoff/departure configuration.

**Source: American Bonanza Society** 

# Take-off/Departure Stall



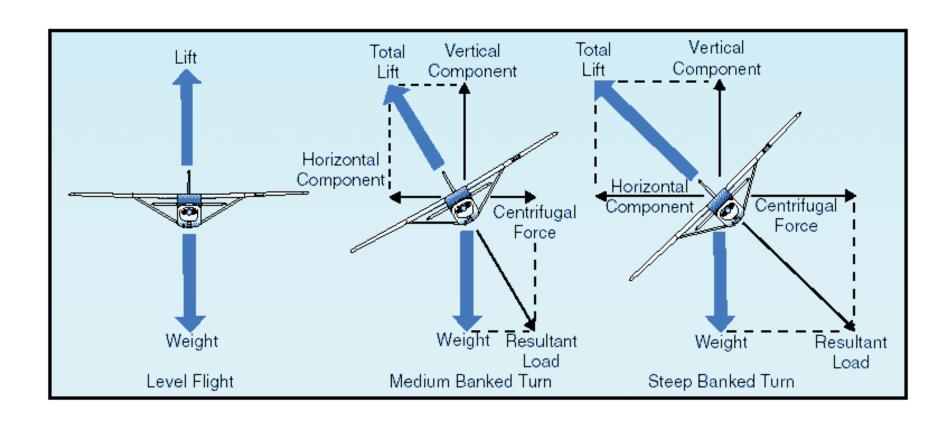
### Approach to Landing Stall



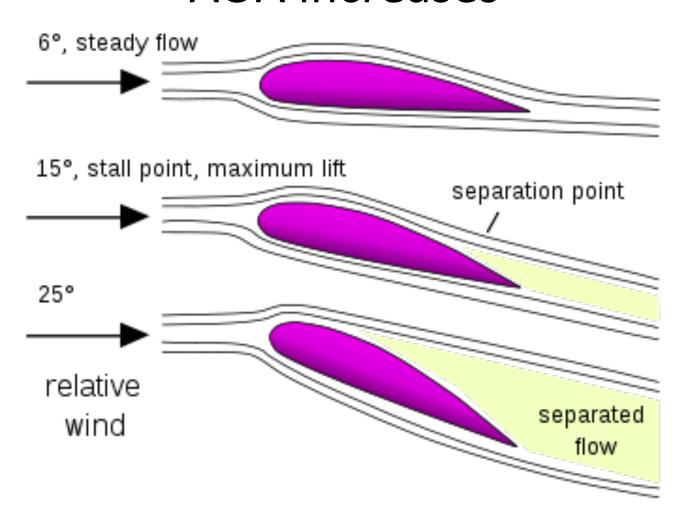
# 4 Forces of Flight?



### What happens to lift during a turn?



# What happens to airflow over wing as AOA increases



# As bank angle increases what happens to stall airspeed?

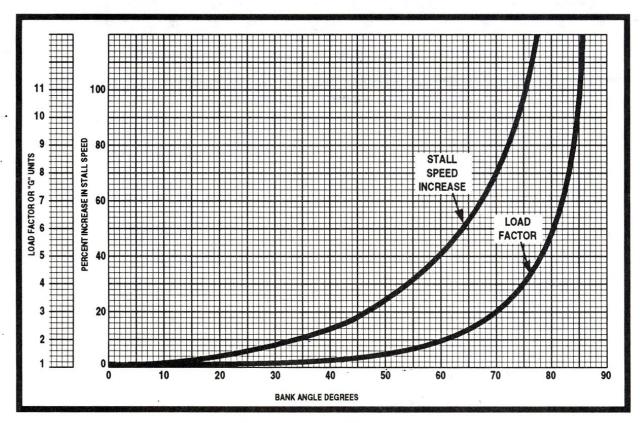


FIGURE 18.—Load Factor/Stall Speed Chart.

# Let's put all that engineering stuff into pilot speak...

#### MOST REARWARD CENTER OF GRAVITY

	WEIGHT LBS	FLAP DEFLECTION	ANGLE OF BANK								
1			0°		30°		45 <sup>0</sup>		60°		
			KIAS	KCAS	KIAS	KCAS	KIAS	KCAS	KIAS	KCAS	
	2400	UP	44	51	47	55	52	61	62	72	
١		10°	35	48	38	52	42	57	49	68	
		30°	33	46	35	49	39	55	47	65	

#### MOST FORWARD CENTER OF GRAVITY

	FLAP DEFLECTION	ANGLE OF BANK							
WEIGHT LBS		00		30°		45°		60°	
		KIAS	KCAS	KIAS	KCAS	KIAS	KCAS	KIAS	KCAS
,	UP	44	52	47	56	52	62	62	74
2400	10°	37	49	40	53	44	58	52	69
	30°	33	46	35	49	39	55	47	65

Figure 5-3. Stall Speeds

### Thanks for coming and have fun!

